

LOW-VOLTAGE BANDGAP REFERENCE

Abstract

Voltage dividing resistors (R_{1a} , R_{1b} , R_{2a} , R_{2b}) are connected in parallel with diode connected bipolar transistors (Q_1 , Q_2) for splitting the voltage to the inputs of an operational amplifier (62, 82). Current is provided to this arrangement by current sources (I_1 , I_2). When the supply voltage is about 0.85 volts, a temperature insensitive reference voltage of about 200 millivolts is available at the drain of a second transistor (M_2 , M_2).